

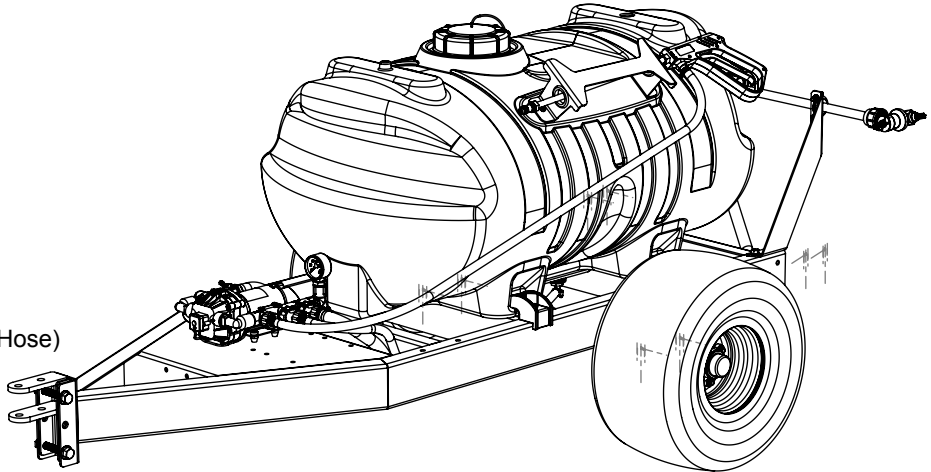
OWNER'S MANUAL

Model: ATVTS-60-12V-BL (5301305)

(60 Gallon, 12 Volt, Trailer Sprayer w/Deluxe Handgun & "Boomless" Boom Assembly)

Technical Specifications

- Corrosion-Resistant Polyethylene Tank
- 12 Volt, 11 Amp, 45psi, 3.8gpm Pump
- Pressure Gauge - Adjustable Pressure
- Suction Line Filter
- Deluxe Pistol Grip Handgun (w/25 Ft. of Hose)
- 3-Nozzle "Boomless" Boom Assembly
- 30 Foot Spray Coverage
- Pneumatic Tires, 18 x 950 - 8
- 10 m.p.h. MAXIMUM



**BEFORE RETURNING THIS PRODUCT
FOR ANY REASON, PLEASE CALL**

1-800-831-0027

**IF YOU SHOULD HAVE A QUESTION OR
EXPERIENCE A PROBLEM WITH YOUR
FIMCO INDUSTRIES PRODUCT:**

1-800-831-0027

**BEFORE YOU CALL, PLEASE HAVE THE
FOLLOWING INFORMATION AVAILABLE:
SALES RECEIPT & MODEL NUMBER. IN MOST
CASES, A FIMCO INDUSTRIES EMPLOYEE CAN
RESOLVE THE PROBLEM OVER THE PHONE.**

General Information

Thank you for purchasing this product. The purpose of this manual is to assist you in operating and maintaining your trailer sprayer. Please read it carefully, as it furnishes information which will help you achieve years of trouble-free operation.

Warranty/Parts/Service

For home usage, products are warranted for one year from date of purchase against manufacturer or workmanship defects.

Commercial users have a 90 day warranty.

Your authorized dealer is the best source of replacement parts and service. To obtain prompt, efficient service, always remember to give the following information...

- Correct Part Description and/or part number.
- Model number/Serial number of your sprayer.

Part descriptions and part numbers can be obtained from the illustrated parts list section(s) of this manual.

Whenever you need parts or repair service, contact your distributor/dealer first. For warranty work, always take your original sales slip, or other evidence of purchase date, to your distributor/dealer.

Assembly

Most of the sprayer has been assembled at the factory.

Attach the axle to the trailer frame with (4) bolts & nuts as shown in the exploded view drawing. Slide a wheel onto the hub of the axle and use the wheel nuts to hold the wheel in place.

The (2) boom mounting brackets are to be mounted on the trailer frame. Use 4 flange bolts and whiz nuts to secure them in place. (see exploded view)

Center the boom tube on the boom mounts and secure in place with the (2) round u-bolts and whiz nuts provided.

Make sure the u-bolts are positioned within the grooves of the grommets on the boom tube.

NOTE: The purpose of these grommets is to prevent metal-to-metal contact between the u-bolts, boom tube, and boom mounting brackets. The grommets will 'compress' as you tighten the whiz locknuts onto the u-bolts. Tighten just so that the boom tube will NOT rotate within the grommets. Alternate the tightening of the locknuts to provide even pressure on the grommet.

**** DO NOT OVER-TIGHTEN the whiz locknuts, as this may cause the boom tube to flatten slightly!**

Attach the boom feeder hose to the boom after routing it through the underside of the frame as needed. Secure in place with a hose clamp provided.



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Testing the Sprayer (continued)

Open the tank lid and be sure the tank is clean and free of foreign material. Fill the tank about 1/2 full with plain water.

NOTE:

It is VERY important for you to test your sprayer with plain water before actual spraying is attempted. This will enable you to check the sprayer for leaks, without the possibility of losing any expensive chemicals.

Open the suction line valve. (located next to the pump) The valve is located at this point to enable the strainer to be taken apart for cleaning.

There are (2) valves located on the manifold. One is a shut off for the boom, and the other is used to bypass solution back into the tank, thus decreasing the overall system's pressure. The bypass valve is the "pressure control" for the entire plumbing system. The more that valve is open the lower the pressure. Fully closed provides maximum pressure to your boom and/or handgun.

You may now start the sprayer. Solution will begin spraying from the boom nozzles when the valve to that line is opened.

Initially have the pressure line open to the tips so that the air which may be trapped in the line will be forced (or purged) out. Check the entire system for leaks.

During the testing period, be sure to observe the spray pattern given by the spray nozzles. If there is any pattern distortion, it will be necessary to remove and clean the affected tips.

Caution: Never use a metal object or other sharp item for cleaning a nozzle tip. It is better to use a nozzle brush (NOT wire brush) or compressed air for tip cleaning.

Rate Chart for Boomless Nozzle (Set of 3)

Gallons per Acre Based on Water - 17 1/2" Spacing								
Note: The same figures are used for 1, 2, or 3 nozzles.								
Pressure P.S.I.	Capacity G.P.M. (3 Nozzles)	1 MPH	2 MPH	3 MPH	4 MPH	5 MPH	6 MPH	8 MPH
20	1.68	28.0	14.0	9.4	7.0	5.6	4.7	3.5
30	2.05	34.4	17.2	11.4	8.6	6.9	5.7	4.3
40	2.40	39.6	19.8	13.2	9.9	7.9	6.6	5.0

Gallons per 1000 Sq. Ft. Based on Water - 17 1/2" Spacing								
Pressure P.S.I.	Capacity G.P.M. (3 Nozzles)	1 MPH	2 MPH	3 MPH	4 MPH	5 MPH	6 MPH	8 MPH
20	1.68	0.64	0.32	0.21	0.16	0.13	0.11	0.08
30	2.05	0.78	0.39	0.26	0.20	0.16	0.13	0.10
40	2.40	0.90	0.45	0.30	0.23	0.18	0.15	0.12

Gallons per 100 Sq. Ft. Based on Water - 17 1/2" Spacing								
Pressure P.S.I.	Capacity G.P.M. (3 Nozzles)	1 MPH	2 MPH	3 MPH	4 MPH	5 MPH	6 MPH	8 MPH
20	1.68	0.064	0.032	0.021	0.016	0.013	0.011	0.008
30	2.05	0.078	0.039	0.026	0.020	0.016	0.013	0.010
40	2.40	0.090	0.045	0.030	0.023	0.018	0.015	0.012

MPH = Miles Per Hour / FPM = Feet Per Minute

PSI = Pounds Per Square Inch / GPM = Gallons Per Minute

** The rate of spray as shown in the chart will remain the same with 1, 2, or 3 Nozzles. **
The only difference will be with the width of the spray swath.

- Refer to your chemical's label to determine the chemical mixture.
- See the tip chart to determine the pressure to be used. The chart will also show the speed used when spraying.
- If the towing vehicle does not have a speedometer, speed can be determined as per the directions.

Determining the proper speed of the pulling vehicle can be done by marking off 100, 200, & 300 feet. The speed chart indicates the number of seconds it takes to travel the distances. Set the throttle and with a running start, travel the distances. Adjust the throttle until you travel the distances in the number of seconds indicated by the speed chart. Once you have reached the throttle setting needed, mark the throttle location so you can stop and go again, returning to the same speed. Add water and proper amount of chemical to the tank and drive to the starting place for spraying. Once you know how much you are going to spray, then determine (from the tip chart) the spraying pressure (PSI), and the spraying speed (MPH). The pressure can be set by running the sprayer with the boom nozzles 'on', and then adjusting the relief valve until the gauge reads the desired pressure. Notice that the pressure will go up when the boom line is shut off. This is normal, and the pressure will return as before when you open the boom line. When selecting pressure from the tip chart, it is a good idea to try for the 20 or 30 p.s.i. range as this allows an excellent nozzle pattern. Spraying at 10 p.s.i. begins to break up the pattern, and at 40 p.s.i. you may notice some drift.

Operation & Calibration

Your sprayer is equipped with (1) ON/OFF switch. It is on the wire assembly that you hook up to your battery. The "-" is the "ON" position and the "o" is the "OFF" position for the switches. Make sure the switch is depressed in the "-" position for operation.

The pump is equipped with an electronic pressure switch that is factory pre-set for it to shut off at 45 p.s.i.. This switch assembly is the 'square box' on the head portion of the pump.

Always fill the tank with a desired amount of water first, and then add the chemical slowly, mixing as you pour the chemical into the tank. You may use the handgun to spray into the solution in order to mix the chemical and water.

Initially begin spraying by opening the handgun. This will enable the air in the line to be purged through the handgun tip, while building pressure.

The pumping system draws solution from the tank, through the strainer/filter, and to the pump. The pump forces the solution under pressure to the handgun and/or boom nozzles.

- Open the handgun by squeezing the handle lever.
- Rotating the adjustable nozzle tip on the handgun will change the tip pattern from a straight stream to a cone pattern (finer mist).
- The pump's electronic pressure switch shuts the motor off when all lines are closed. The system will remain pressurized, and the pump motor will restart automatically when either the handgun, or boom line is opened. If the bypass line valve is in the open position, the pump will not shut off automatically.
- The (3) nozzles are fixed at 17 1/2" spacing.
- All (3) nozzles spraying at the same time will allow a maximum coverage of 30 feet.
- The center nozzle will spray an 80" swath.
- Each of the (3) nozzles has a shutoff valve, so you can shut off each nozzle individually. This may help in achieving the actual coverage needed for your application.

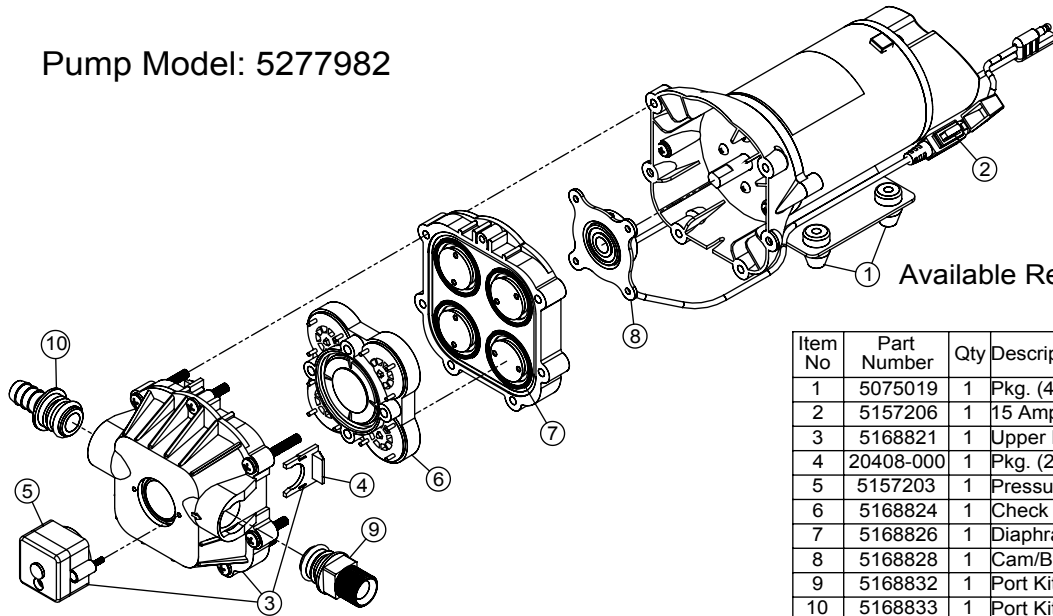
When it becomes necessary to clean the screen, you will need to shut off the ON/OFF valve next to the pump, on the inlet side. Remove the screen. Rinse and tap out the dirty screen and put back in it's original position when clean. Do this on a regular basis to maintain a clean screen.

DO NOT EXCEED 10 M.P.H. AT ANYTIME

Speed Chart			
	Time Required in seconds to travel a distance of:		
Speed in M.P.H. (Miles per Hour)	100 Ft.	200 Ft.	300 Ft.
1.0	68 sec.	136 sec.	205 sec.
2.0	34	68	102
3.0	23	45	68
4.0	17	34	51
5.0	14	27	41
6.0	11	23	34
7.0	9.7	19	29
8.0	8.5	17	26
9.0	7.6	15	23
10.0	6.8	14	20

- Four things must be considered before spraying with the boom:
1. How much chemical must be mixed in the tank?
 2. Rate of spray? (Gallons per Acre to be sprayed)
 3. What Pressure (p.s.i.) will be used?
 4. Speed Traveled (m.p.h.) while spraying?

Pump Model: 5277982



Available Replacement Parts

Item No	Part Number	Qty	Description
1	5075019	1	Pkg. (4) Grommets
2	5157206	1	15 Amp 'Mini Blade' Fuse
3	5168821	1	Upper Housing w/Pressure Switch
4	20408-000	1	Pkg. (2) Clips (Port Fitting)
5	5157203	1	Pressure Switch Assembly
6	5168824	1	Check Valve w/O-Ring
7	5168826	1	Diaphragm Kit w/Pistons & (4) Screws
8	5168828	1	Cam/Bearing Kit, w/Set Screw
9	5168832	1	Port Kit Fitting, 1/2" MNPT
10	5168833	1	Port Kit Fitting, 1/2" Hose Barb

Troubleshooting the Pump:

Motor does not run:

- Check for loose wiring connection(s).
- Make sure the 'ON/OFF' switch in the lead wire assembly is in the 'ON' position. "I" is the 'ON' position and 'O' is the 'OFF' position.
- Check for defective pressure switch. Make sure you are connected to a good 12 volt power source. Make sure any on/off switches are in the 'on' position. Remove the cap to the pressure switch. Pull both red wires off of their terminals, and touch the two ends together. If your pump runs when you do this, your pressure switch will need to be replaced.
- Check the fuse.
- Check for low voltage at the power supply.

Pump does not prime:

- Check for air leaks in supply line.
- Check for debris in the check valve assembly.
- Check for defective check valve.
- Check for clogged strainer/filter.
- Check for cracks in the pump housing.
- Check for empty product supply.

Pulsating flow (surging):

- Check for defective pressure switch.
- Check for leaks in the discharge line.
- Check for restriction in the discharge line.
- Check for debris in nozzle orifice.
- Discharge hose may be too long.
- Check for clogged strainer.

Motor continues to run after discharge is shut off:

- Check for empty product supply.
- Check for open bypass valve. (if equipped)
- Check for low voltage.
- Check for leak in discharge line.
- Check for defective or dirty check valve.
- Check for defective pressure switch.

Pump Specifications

Flow Rate:	3.8 GPM @ Open Flow
Current:	7.4 Amps @ 40 PSI
Check Valve:	Viton
Port Type:	Plug-In Port
Motor Voltage:	12 Volts DC
Wetted Parts Housing:	Polypropylene
Diaphragm:	Santoprene
Liquid Temperature:	130° F max.

GPM = Gallons Per Minute
PSI = Pounds per Square Inch
DC = Direct Current

STOP

WARNING

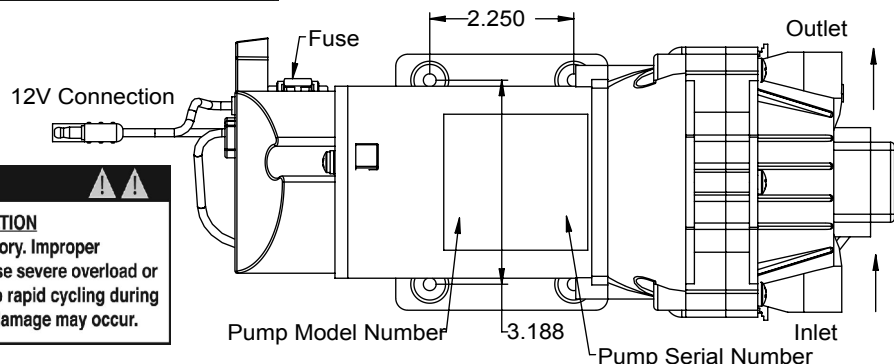
STOP

DO NOT USE PUMP IN AN EXPLOSIVE ENVIRONMENT. DO NOT USE TO PUMP FLAMMABLE FLUIDS, GASOLINE, KEROSENE, FUEL, OIL, ETC.

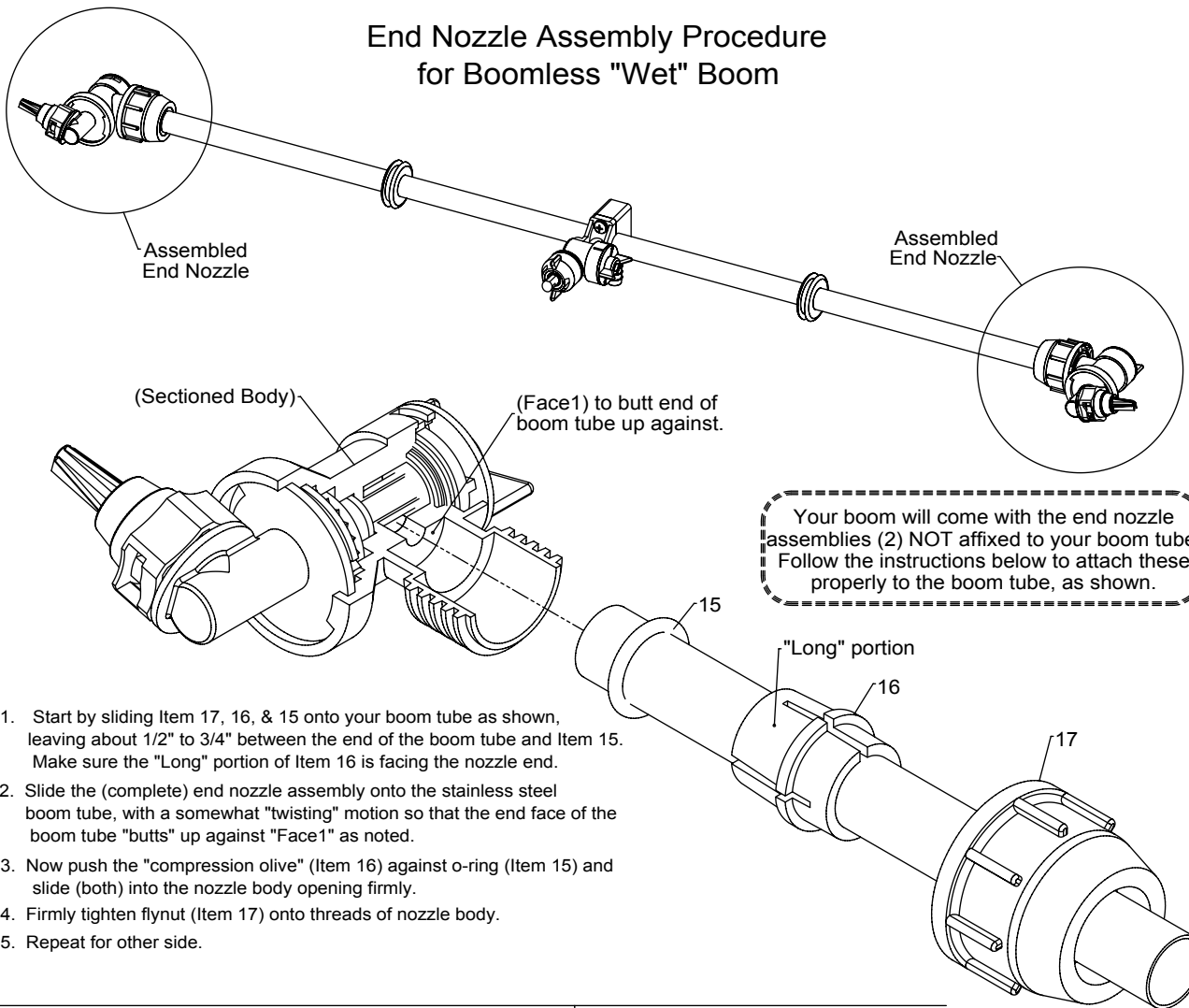
⚠ CAUTION ⚠

PRESSURE SWITCH OPERATION

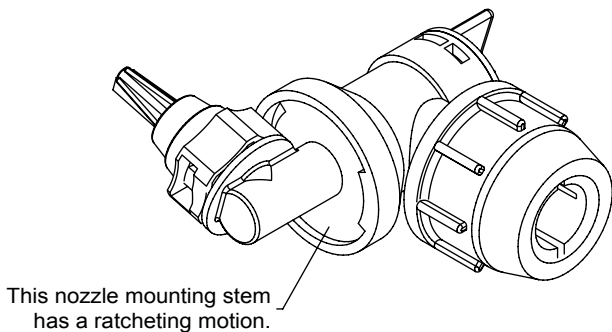
Pressure switch is pre-set at the factory. Improper adjustment of the pressure switch, may cause severe overload or premature failure. If the pump is subjected to rapid cycling during normal operation, or infrequent periods, damage may occur.



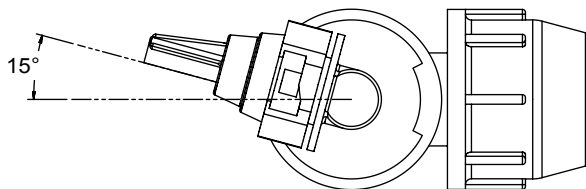
End Nozzle Assembly Procedure for Boomless "Wet" Boom



End Nozzle Information (#5275122)



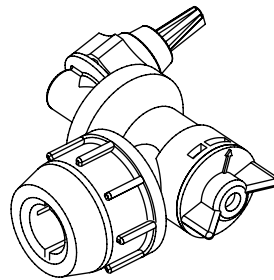
** Each "click" of the ratcheting motion is approx. 15° **



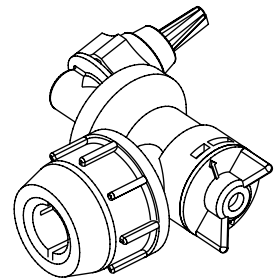
For proper/optimal spray coverage, the nozzle must be at a 15° angle

The 15° angle shown will prevent the outer nozzles from overlapping with the center nozzle.

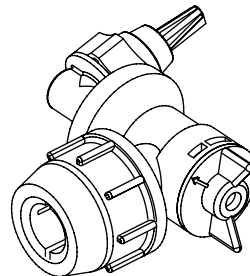
"On/Off" Valve Positions



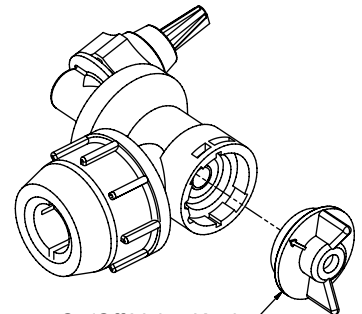
Valve "Open"



Valve "Closed"



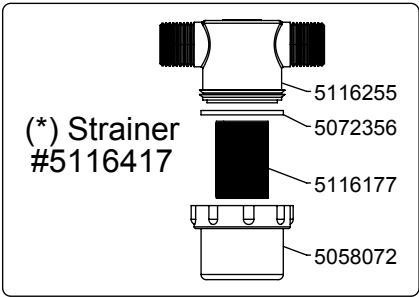
Service Position



On/Off Valve Knob

Eliminate line pressure, then pull out to check diaphragm condition.

Note: The check valve & diaphragm can fall out during transport, if the knob is not turned to the "ON" or "OFF" position.



Parts List: ATVTS-60-12V-BL (5301305)

Item No	Part Number	Qty	Description
1	5006186	4	#10-24 Hex Whiz (Flange) Locknut
2	5006259	12	3/8"-16 Hex Whiz (Flange) Locknut
3	5006307	4	5/16"-18 Hex Whiz (Flange) Locknut
4	5006337	2	1/2"-13nc Hex Flanged Whiz Nut Gr. 5
5	5010202	1	Poly Elbow, 1/2" MNPT x 3/8" HB
6	5010203	1	Poly Elbow, 1/2" MNPT x 1/2" HB
7	5020152	1	Hose, 1/2"-1 Brd. x 6 Ft. (72")
8	5020228	1	Hose, 1/2"-1 Brd. x 36"
9	5020527	1	Hose, 3/8"-1 Brd. x 25 Ft.
10	5020538	1	Hose, 3/8"-1 Brd. x 43"
11	5034101	4	H.H.C.S., 3/8"-16 x 1 3/4"
12	5034220	2	Round U-Bolt, 5/16"-18 x 1 5/16" x 1 3/4"
13	5034700	2	H.H.C.S. Flanged 1/2"-13nc x 3 1/2" Long
14	5038698	4	Plastic Tank Hold-Down Leg Clip
15	5038775	1	Handgun Bracket
16	5038833	1	Boom Mount R.H.
17	5038834	1	Boom Mount L.H.
18	5051114	4	Hose Clamp (3/8"-1/2")
19	5051144	4	Hose Clamp, 3/8"
20	5058188	1	Tank Lid w/Lanyard
21	5075014	2	Rubber Grommet (Black)
22	5117234	2	#10-24 x 1/2" Phillips Truss Head Machine Screw
23	5117307	8	3/8"-16 x 1" Whiz (Flange) Lockscrew
24	5117314	1	#10-24 x 3" Truss Head Machine Screw
25	5127192	1	Manifold Spacer (3.8gpm)
26	5167007	1	Pressure Gauge, 0-100 p.s.i.
27	5169249	1	60 Gallon Elliptical Tank (White)
28	5272464	2	Wheel, 18 x 9.5 x 8 - 4-Bolt
29	5273204	1	Hitch Clevis Weldment
30	5273212	1	5 Ft. Extension Wire
31	5273959	1	Deluxe Pistol-Grip Handgun w/X-26 Tip
32	5274443	1	Lead Wire Assembly (w/Switch), 96"
33	5274955	1	Axle & Hub Assembly
33.1	5006301	8	1/2"-20 Hex Cone Wheel Nut
33.2	5072471	2	Grease Seal
33.3	5046327	2	Grease Cap
33.4	5031139	4	Cone Bearing
33.5	5006300	2	Castle Nut, 1"
33.6	5101081	2	Cotter Pin, 5/32" x 2-1/4"
33.7	5274954	1	Axle Weldment (ATVTS-60)
33.8	5085018	2	Hub Assembly (4-Stud)
34	5275260	1	"Wet Boom" Assembly
35	5277179	1	Manifold Assembly
35.1	5143405	1	Manifold w/Mounting Tab
35.2	5010430	1	Port Kit Elbow, 1/2" FNPT
35.3	5010236	1	Poly Elbow, 1/2" FNPT x 1/2" FNPT
35.4	5041073	1	Poly Reducing Bushing, 1/2" MNPT x 1/4" FNPT
35.5	5016066	3	Garden Hose Washer
35.6	5149034	2	Poly Swivel, 3/8" Hose Barb
35.7	5006209	3	Poly Knurled Swivel Nut, 3/4" FGHT
35.8	5143188	2	Nylon Shut-Off Valve (3/4" GHT)
35.9	5149035	1	Poly Swivel, 1/2" Hose Barb
36	5278066	1	Pump/Strainer Assembly
36.1	5277982	1	High Flo Gold Series 3.8 GPM Pump
36.2	5277174	1	Strainer/Valve Assembly
36.2.1	5010430	1	Port Kit Elbow, 1/2" FNPT
36.2.2	5116417	1	Nylon "TEE" Line Strainer (1/2" MNPT, 50 Mesh)
36.2.3	5005190	1	Poly Adapter Coupler, 3/4" FGHT x 1/2" FNPT
36.2.4	5143188	1	Nylon Shut-Off Valve (3/4" GHT)
36.2.5	5067121	1	Poly Hose Fitting, 3/4" MGHT 1/2" HB
36.2.6	5016066	1	Garden Hose Washer
36.3	5117168	3	#10-24 x 1" Phillips Truss Head Machine Screw
37	5278078	1	Frame Weldment (ATVTS-60) (Red)

Maintenance During/After Spraying

Periodically close the suction line valve. Check the line strainer and clean the screen. Always flush the entire plumbing system with water or a neutralizing agent, such as FIMCO Tank Neutralizer and Cleaner, after completing the spraying operation.

Proper care and maintenance will prolong the life of your sprayer.

After use, fill the sprayer tank part way with water. Start the sprayer, and allow the clear water to be pumped through the plumbing system and out through the spray nozzles.

Refill the tank about half full with plain water and use FIMCO Tank Neutralizer and Cleaner, and repeat cleaning instructions above. Flush the entire sprayer with the neutralizing/cleaning agent, then flush out one more time with plain water. Follow the chemical manufacturer's disposal instructions of all wash or rinsing water. For the boom, (if applicable) remove the tips and screens from the nozzle assemblies. Wash these items out thoroughly. Blow the orifice clean and dry. If the orifice remains clogged, clean it with a fine bristle (NOT WIRE) brush, or with a toothpick. Do not damage the orifice. Water rinse and dry the tips before storing.

WARNING: Some chemicals will damage the pump valves if allowed to soak untreated for a length of time! ALWAYS flush the pump as instructed after each use.

Winter Storage

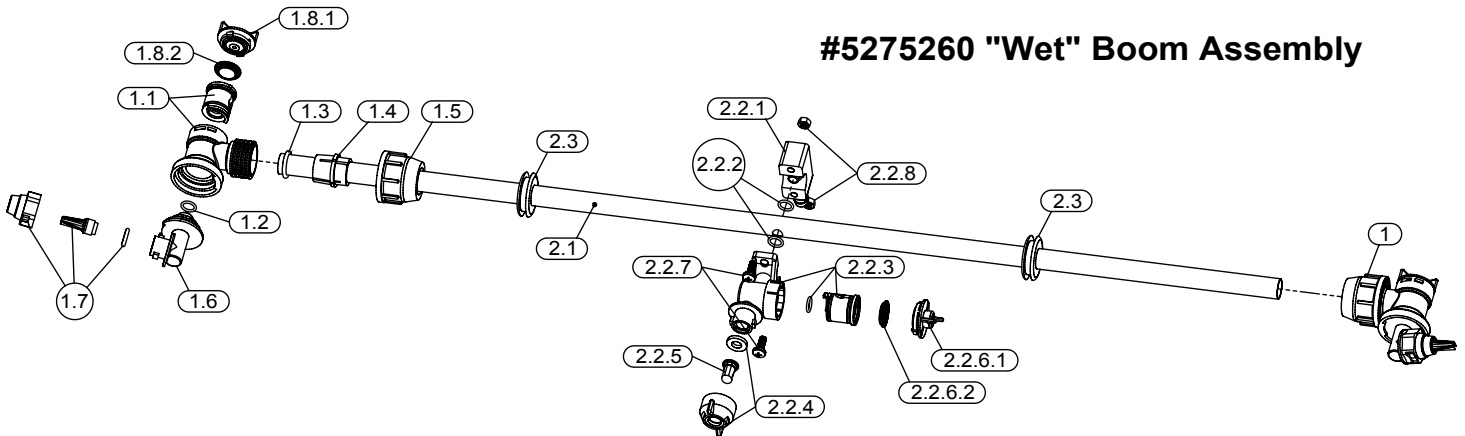
Drain all water out of your sprayer, paying special attention to the pump, handgun, and valve(s). These items are especially prone to damage from chemicals and freezing weather.

The sprayer should be winterized before storage by pumping a solution of RV antifreeze through the entire plumbing system. This antifreeze solution should remain in the plumbing system during the winter months. When spring time comes and you are preparing your sprayer for the spray season, rinse the entire plumbing system out, clearing the lines of the antifreeze solution. Proper care and maintenance will prolong the life of your sprayer.

Information About The Sprayer

In this pumping system, solution is drawn from the tank, and forced to a planned source, such as boom nozzles, or handgun. The pressure is controlled by opening/closing the valve which recirculates solution back into the tank..

#5275260 "Wet" Boom Assembly



Item No	Part Number	Qty	Description
1	5275122	2	End Nozzle Assembly (Wet Boom)
1.1	5002499	1	Boomless Nozzle Body w/Core (Outer)
1.2	5072518	1	Stem O-Ring
1.3	5072517	1	Compression O-Ring
1.4	5010427	1	Compression Olive
1.5	5006348	1	Flynut
1.6	5132073	1	Nozzle Holder Stem
1.7	5274861	1	XT Spray Nozzle, Cap, & O-Ring
1.8.1	5088024	1	Yellow ON/OFF Valve Knob
1.8.2	5063255	1	Diaphragm
2	5275712	1	Wet Boom Sub-Assembly
2.1	5100316	1	Boom Tube

Item No	Part Number	Qty	Description
2.2	5275123	1	Center Nozzle Assembly (Wet Boom)
2.2.1	5051137	1	Hose Barb Saddle
2.2.2	5072509	2	O-Ring
2.2.3	5002500	1	Center Nozzle Body w/Core (Wet Boom)
2.2.4	5274862	1	Center Boomless Nozzle Cap w/Gasket
2.2.5	5018329	1	Red Spray Tip
2.2.6.1	5088024	1	Yellow ON/OFF Valve Knob
2.2.6.2	5063255	1	Diaphragm
2.2.7	5117310	2	SS Screw, 6mm x 16mm (5/8")
2.2.8	5006347	2	SS Nut, 6mm
2.3	5075016	2	Rubber Grommet